

## **Special Project Abstracts**

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# **Special Project Abstracts**

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## **The EMS Authority's Special Grant Program**

The Health and Safety Code (Sec. 1797.200) permits a county to develop an EMS program. Each county developing an EMS program must designate a local EMS agency, which may be the county health department, an agency established and operated by the county, an entity with which the county contracts for the purposes of EMS administration, or a joint powers agency. Funding of local EMS agencies is generally the responsibility of the county establishing the EMS program. In California, the development of EMS systems has been varied as a result of the state's large size, geographical features, diverse population distribution, and differing availability at the local level of adequate finances and other resources. In an effort to promote the development and maintenance of EMS systems, some state and federal funding is available to assist local EMS agencies in maintaining, developing, improving, and evaluating local services.

The EMS Authority administers two local assistance funding programs. They are (1) the State General Fund and, (2) the Federal Preventive Health and Health Services (in California called Prevention 2010) Block Grant.

Prevention 2010 Block Grant funds (approximately \$1 Million) are allocated to local EMS agencies annually for special projects to develop, implement, and improve local and state EMS capabilities.

### **Special Project Grant Selection Process**

The EMS Authority utilizes a competitive grant selection process. Proposals are sorted and reviewed by target areas to allow for an organized and equitable review process.

A review committee consisting of 6-8 reviewers drawn from the EMS community convenes in Sacramento. The committee consists of EMS administrators, medical directors, and subject experts as determined by the EMS Authority. Individuals do not serve on the committee if their local EMS agency has submitted an application for funding. There is one primary reviewer, one secondary reviewer and a recorder for each grant application. They review in depth and present the project to the whole committee. All reviewers receive copies of all of the proposals being reviewed by the committee.

The reviewers make ranked recommendations for funding of projects and provide written comments on each proposal to the EMS Authority.

The EMS Authority makes the final selection of projects to be funded. Funds are allocated according to the ranking of the proposals. Amounts allocated are related to the appropriateness of the budget, the potential benefit, and the availability of funds.

The EMS Authority provides a summary of the review committee's comments (positive and negative) for each proposal to help applicants improve future proposals for funding.

With respect to Special Project Grants, it is EMSA's goal to continue the funding stream to local EMS agencies. The specific use of these funds are to assist local EMS agencies to improve underdeveloped EMS system components.

It is also our goal to improve the transferability of projects, by examining the statewide application of proposed projects. We wish to reduce the reliance upon special projects to augment local EMS agency budgets.

The EMS Authority distributes the abstracts of projects annually and will continue a participatory review of grant submissions to meet these goals.

Section I contains the Abstract Reports from FY 01/02.

Section II contains the Abstract Reports from FY 02/03.

# **SECTION I**

## **SPECIAL PROJECT ABSTRACTS**

### **2001/02 SFY GRANTS**

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## High School CPR

### Grantee:

San Mateo County EMS Agency

**Project Number:** EMS-1056

**Project Period:** 07/01/01-06/30/03

**Project Amount:** \$45,000.00

### EMS Administrator:

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### Introduction

According to the American Heart Association cardio-pulmonary resuscitation (CPR) saves lives of victims of cardiac and respiratory arrest. However, despite multiple studies that support the effectiveness of basic life support (BLS) CPR, most victims of cardiac arrest do not receive the benefit of early intervention and will not survive. CPR is shown to be most effective when started immediately after a victim's collapse.

San Mateo County high school students, like their peers throughout the country, are often found participating in high-risk social and health behaviors. At some time during their teen years, high school students may be faced with situations that require them to respond to the unexpented such as the collapse of a fellow student/teacher or the choking young child in their care. Additionally, teens often tend to "congregate" at public venues such as shopping malls, movie theaters, fast-food restaurants and sporting events. Persons of various ages with cardiac risk factors also frequent these venues and may at some time require the skill of a citizen trained in CPR.

### Project Description

The High School CPR Educational Program proposal was written as a two-year grant. The Project's main goal was to train 90% of Sequoia Union High School District

9<sup>th</sup> graders in CPR and to pilot a CPR program at one high school within the Jefferson Union High School District. The permanent establishment of a CPR Education Program within the Sequoia Union High School District and expansion of the program to the two other high school districts in the county is the long-term objective of this project. This time frame was proposed to allow sufficient time to seek permanent funding for this project within the two high school districts. In order to achieve this goal, the committed support of all project collaborators and obtainment of permanent program funding will be necessary.

### Tasks/Methodology

#### Year One

**Objective One:** To determine the benchmark for citizens initiated CPR within San Mateo County.

**Objective Two:** To establish cooperative agreements with American Medical Response, Catholic Health Care West - Sequoia Hospital, Joint Powers Authority and Sequoia Union High School District.

**Objective Three:** To establish a pool of San Mateo County paramedic American Heart Association CPR instructors.

**Objective Four:** To obtain necessary equipment and supplies.



**Objective Five:** To integrate the model high school CPR education and training program into the 9<sup>th</sup> Grade Advance Integrated Science curriculum at four Sequoia Union High School District sites.

**Objective Six:** To establish appropriate partnerships to plan for the piloting of a CPR program at one site in the Jefferson Union High School District for the 2001-02 academic year.

## **Year Two**

**Objective One:** To maintain the High School CPR Education Program at the four established Sequoia Union High School District sites.

**Objective Two:** To implement the High School CPR Education Program at Menlo Atherton High School.

**Revised Objective Two:** To present a minimum of one train the trainers CPR instructor's course for high school teachers in the Sequoia Union High School District.

**Objective Three:** To implement a pilot High School CPR Education Program at one Jefferson Union High School District site.

**Objective Four:** To perform an overall evaluation of the San Mateo County High School CPR Education Program.

## **Outcome**

The Project's main goal of offering CPR training to 90% of the 9<sup>th</sup> grade high school students attending schools in the Sequoia Union High School District was not fulfilled as proposed. The inability to meet the 90% rate resulted from: 1) only 50% of the 9<sup>th</sup> grade students at one school (Sequoia

High School) were able to participate and 2) one school in the district, Menlo Atherton High, did not participate in the Project at all. Overall the Project was offered to 70% of the 9<sup>th</sup> grade students attending schools in the Sequoia Union High School District. The Project did succeed in accomplishing the goal of piloting CPR training at one Jefferson Union High School District site. Westmoor High School was chosen to participate in the pilot project. CPR training was offered to 100% of freshmen students, who were all required to take Advanced Integrated Science classes. Eighty-two percent (82%) of participating students at this school successfully completed the skills and written examinations and received AHA Heartsaver CPR certification. In general, the project noted that classes in which the high school instructors actively participated in the trainings had a better overall course completion and certification rate than those whereby the high school instructors were either not present or did not actively participate in the training sessions. Additional, classes that were held in traditional classroom settings, with 30 students or less, achieved a higher rate of success than those that consisted of as many as 100 students and were held in non classroom settings such as cafeterias and gymnasiums.

## **Conclusion**

San Mateo County EMS data revealed that bystander CPR is initiated on only 13-14% of all cardiac arrest cases. Throughout the course of this Project, 9<sup>th</sup> grade students at participating high schools satisfactorily demonstrated the cognitive and psychomotor skills required to perform cardio-pulmonary resuscitation and the relief of foreign body airway obstruction (the Heimlich maneuver). The long-term effects of this program remain

to be seen; in the meantime San Mateo County has over 2,500 citizens newly trained and certified in CPR.

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## Emergency Medical Dispatch

**Grantee:**

Sierra-Sacramento Valley EMS Agency

**Project Number:** EMS-1058

**Project Period:** 07/01/01-06/30/03

**Project Amount:** \$90,905.00

**EMS Administrator:**

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### Introduction

This grant was intended to fund training of Emergency Medical Dispatch to any public safety answering points and dispatch centers in our region wishing to participate.

### Project Description

The grant will fund the implementation of Emergency Medical Dispatch pre-arrival instructions throughout the Sierra-Sacramento Valley (S-SV) region. The program was offered to every PSAP in the S-SV region.

### Tasks/Methodology

A users group was formed to review the different systems available. It was decided that the PSAP should choose which program they wished to implement among the nationally recognized programs. Some PSAPs that were already providing EMD chose to upgrade their Quality Improvement Component, some updated their card systems. Training was provided by Priority Dispatch in a number of different locations.

### Outcome

The software was installed, card sets were distributed and updates were completed.

### Conclusion

Yolo County Communications, a JPA providing dispatch for all of Yolo County with the exception of the City of Davis and the University completed their training and implemented their program. They are working on a press release at this time and have some saves.

The City of Davis and the University declined to participate in the program, citing staffing issues and liability concerns.

Nevada County Sheriff's Office, the primary PSAP for that county, transfers their medical calls to Grass Valley CDF for pre-arrival instructions.

Placer County PSAPs were providing EMD and chose to upgrade the systems that they were currently using. The Lincoln and Rocklin PSAPs took advantage of the Priority Dispatch training and card sets.

Sutter and Yuba County declined to participate.

This grant was very well received by the majority of the PSAPs in the S-SV region and was completed under budget. We did have to revise our objectives and extend the grant to a two-year period due to staffing issues at some of the PSAPs.

# **SECTION II**

## **SPECIAL PROJECT ABSTRACTS**

**2002/03 SFY GRANTS**

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## Senior Injury Prevention Project (SIPP)

**Grantee:**

Alameda County EMS Agency

**Project Number:** EMS-2049

**Project Period:** 07/01/02-06/30/03

**Project Amount:** \$75,000.00

**EMS Administrator:**

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### Introduction

In the year 2000 people over the age of 65 represented 10.2% of the Alameda County population. That same 10% of the population accounted for more than 43% of the hospitalizations due to unintentional injuries. The same is true for neighboring counties as well as the rest of California. The over 60 population is also the fastest growing population in the United States. The older adult population is expected to double over the next 20 years according to the U.S. Census Bureau. These numbers and the future impact they could have on the already overburdened health care system make it obvious that it is crucial to develop and implement programs that assist older adults to remain healthy and injury free.

### Project Description

The Senior Injury Prevention Project (SIPP) has been working to address the need for a comprehensive older adult injury prevention program in Alameda County and to raise awareness in Alameda County, the Bay Area and throughout California regarding the need for older adult injury prevention programs.

Over the past three years, recognition of the necessity for older adult injury prevention efforts has grown. Many community organizations, health care providers and county agencies within Alameda County and from other counties

throughout California are beginning to implement programs focused on Healthy Aging and Older Adult Injury Prevention. Unfortunately there is not sufficient funding to support the efforts being made, or the programs that need to be implemented. Research has proven the efficacy of injury prevention programs in preventing injuries and proven injury prevention to be cost-effective, however due to the economic situation in California programs that play a crucial role in Health Aging and Injury Prevention have been cut and the likelihood of any additional state or federal funding for older adult programs at this time is slim.

As SIPP was being structured we made the decision that rather than create new services we would focus on locating existing programs that provided some component of injury prevention and link them to other service providers. There are multiple benefits to using this approach. The expertise is already there, the programs have already been tested in the community, it helps to prevent people from “falling through the cracks” and program administrators are usually pleased to be part of a continuum of care. This approach also allows us to identify where “gaps” in the continuum exist or where staffing levels are too low to meet client needs. SIPP will work with partner agencies to develop grant proposals for funding to expand or enhance the services they are providing. The collaborative aspect of SIPP and its partners is a distinct advantage when applying for grant funding. Established agencies are also usually

capable of providing both data to support the need for additional funding and specific details on how the funding will be used.

### **Tasks/Methodology**

The project was organized in three phases, Phase I concerned research, organizing and data analysis. During Phase I SIPP conducted several meetings to discuss proposed activities and potential collaboration. Since falling was the number one cause of unintentional injury hospitalization the determination was made to focus initially on Falls Prevention. SIPP hosted 14 focus groups to gather information on the causes and factors that contribute to falls. Phase II involved disseminating information, identifying organizational and funding resources, and creating a network of stakeholders. Using information gathered from research as well as the data collected in focus groups, SIPP developed and began to distribute Falls Prevention materials. We regularly conduct interactive Falls Prevention Discussion groups with older adults throughout the county. SIPP made presentations to potential funders to educate them regarding the issue of older adult injuries and prevention. Phase III began the implementation of the SIPP interventions, which involved a multi-faceted approach to falls prevention including a comprehensive education strategy focused on the environment, behaviors, physical fitness, and nutrition and medication management. This phase also includes raising awareness regarding the need for older adult injury prevention programs; helping to expand the network of senior injury prevention professionals working to encourage healthy aging and assisting in the development of falls prevention programs throughout the Bay Area and Northern California. SIPP shares data on the contributing factors to falls as well as

information on the structure and process used to implement our Falls Prevention Program.

### **Outcome**

SIPP has produced a brochure that is distributed at hospitals, senior centers, residential facilities, libraries, churches, and by American Medical Response. The brochure describes the project and gives contact information to host Falls Prevention Discussion Groups. SIPP created an Injury Prevention Resource Directory that lists all agencies, businesses, organizations etc. that have programs involving older adult fitness, nutrition information, medication management, balance testing, or home safety checks. SIPP produced a Best Practices Model for the fitness community that describes the types of fitness programs that are appropriate for older adults and suggestions for marketing to the older adult population. SIPP wrote a Falls Prevention Manual that is distributed at the Falls Prevention Discussions. The manual has four chapters entitled, “Changing Behaviors”, “Nutrition and Medication Management”, “Fitness”, and “Home Safety Checklist”. We have developed a Falls Prevention poster that also reflects the four chapters of the manual. The poster is being distributed to senior centers, residential facilities, hospitals, libraries, and to the faith based community for display to raise awareness regarding the roles each individual has in preventing falls. The poster also helps to remind people that falls CAN BE prevented.

SIPP has also trained older adult peer counselors to conduct discussion groups. We received grant funding and are able to offer the peer counselors a stipend for each discussion group they lead.

SIPP is working with the Geriatric Assessment Program at Alta Bates/Summit

Medical Center, a SIPP partner, to dedicate a portion of the San Francisco Foundation grant to expanding their program to include home visits by a Physical Therapist/Occupational Therapist. The “client” is contacted daily by the Alta Bates/Summit Telecare volunteers and if the patient is determined to be having difficulties or expresses concerns about falling the call is referred back to the case manager for evaluation and intervention.

SIPP has worked to create linkages between Fire departments and case management agencies throughout Alameda County so that when 911 is accessed by an older adult who has fallen but is not injured and therefore not transported they are referred (with authorization) to a case manager who will assess the fall victim’s situation for potential interventions. We currently have fall referral programs in the following cities: Fremont, Berkeley, Livermore/Pleasanton (already existed), Union City, San Lorenzo, Hayward, Castro Valley, San Leandro, Dublin and the unincorporated areas. The City of Alameda Fire Department is in the process of setting up their Fall Referral Program.

The SIPP Coordinator has made presentations on the issue of falls and Fall Prevention Programs to several other counties in the Bay Area and beyond, including Contra Costa, Marin, San Mateo, Santa Clara, and Riverside. SIPP participated in the Blueprint for Falls Prevention in Sacramento, and the SIPP Coordinator will be moderating the Falls Outreach workshop for the American Society on Aging and The National Council on the Aging (ASA/NCOA) Joint Conference in 2004.

The awareness of the need for older adult injury prevention programs has increased considerably since the inception of SIPP. Many organizations are expressing a willingness to participate in older adult injury prevention, most notably falls prevention. EMS personnel are in an ideal position to participate in raising community awareness and to take the lead role in a campaign to educate older adults about aging in a safe and healthy manner. EMS can provide the information link to help older adults connect with services in their communities that will help them age safely and in good health.

Unless we reduce the number of preventable injuries occurring, the future impact of older adult injuries on the EMS system could be significant when you consider that the over sixty segment is the fastest growing population in California and throughout the United States. EMS’ participation in older adult injury prevention will benefit older adults, the EMS system, and the already overburdened healthcare system by preventing injuries that would result in more 9-1-1 calls, more emergency room visits and more hospitalizations.

## **Conclusion**

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## Risk Watch Injury Prevention

**Grantee:**

Coastal Valley EMS Agency

**Project Number:** EMS-2050

**Project Period:** 07/01/02-12/31/03

**Project Amount:** \$29,800.00

**EMS Administrator:**

Bruce Lee

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### Introduction

The EMS Agency began implementation of the project during FY 2003. There was a delay in getting the program up and running due to the late signing of the contract between the County of Sonoma and the EMS Authority, as both entities were affected by the delayed approval of the State budget during the beginning of the 2003 fiscal year. While “official” activities did not begin until the final signing of the contract (January 2004), preliminary planning activities did begin over the summer and fall of 2003. Discussions were initiated with various stakeholder groups and the general outline of the Risk Watch program were distributed to interested stakeholders so that when the contract funding issue was resolved, those same stakeholders could begin project activities in earnest.

The Risk Watch Program is a copyrighted program that was developed and instituted by the National Fire Prevention Association. Risk Watch had its genesis in NFPA’s Learn Not To Burn program. The NFPA expanded the focus of the Burn program to include other causes of documented childhood injuries including firearms, drowning, choking, falls, bicycle and pedestrian activity, vehicles and poisoning. Duke University was charged with developing the specific modules and curriculum for each safety area and NFPA then produced the teacher and student workbooks for each subject area.

### Project Description

The project’s purpose was to establish the Risk Watch Injury Prevention Program as a useful option for those entities desiring to promote injury prevention awareness for our region’s children (K-8<sup>th</sup> grade). These entities include first responder agencies, law enforcement agencies, ambulance transport providers, the EMS Agency, local schools and after school programs. Another goal of the project team was to affiliate with the local Safe Kids coalition that was also involved in developing injury prevention strategies.

Additionally, the project team wanted to standardize “injury prevention” presentations in order to ensure that the same consistent message was being given, no matter who the presenter or where the setting was. The project’s major objectives were:

- Develop a project implementation plan.
- Establish an organizational and administrative structure for the coordination, planning, development and implementation of the Risk Watch Program.
- Establish a multi-disciplinary project management team.
- Prioritize program component implementation and resource allocation.



- Purchase supplies and materials and distribute it for program implementation.
- Implement Risk Watch program in CVEMS target schools

### **Tasks/Methodology**

As chronicled in the Agency's quarterly reports, an administrative structure was established for the project. The EMS Agency's Sonoma County EMS Coordinator was assigned project management responsibilities and reported to the Agency's Regional Administrator. Sonoma County's DHS Administrative Division provided fiscal agent assistance for the project. These activities occurred during the project contract negotiations period. The Agency's project manager established a multi-disciplinary project management "overhead" team. Team members included representatives from a local city fire department, EMS transport provider, law enforcement agency, EMS Agency and the local schools' insurance group agency.

Once the overhead team was established, the West Coast — Regional NFPA/Risk Watch liaison was brought into the project. Since the Risk Watch program is copyrighted, NFPA "clearance" was needed in order to secure a membership account for purposes of acquiring approved Risk Watch materials. The NFPA liaison met with the team several times over the course of the project to assist with establishing the account as well as sharing best practices from other Risk Watch projects. The Agency project manager acquired a sampling of Risk Watch materials and distributed those to the overhead team members for review.

The team members reviewed the pertinent Risk Watch materials and met to prioritize the focus of the project, i.e., which

grade levels to begin targeting along with schools within the region that had expressed an interest in the project. The team then branched out and began contacting schools to ascertain what interest was out there for adopting an injury prevention program. Team members also joined a local Safe Kids coalition, since the *Risk Watch* project and the Safe Kids' agenda were so similar. A dual logo letter was sent out to area school district superintendents announcing the availability of Risk Watch materials and curriculum. Unfortunately, the news about the State budget projected deficit for FY 03-04 broke at the same time.

This development caused the team to re-examine its preliminary planning assumptions regarding program implementation. The team decided that the one-year implementation period was overly ambitious given the budget difficulties that we are still experiencing. As the State budget and assorted bond measures play out, the feeling shared by the team was that more schools will eventually come on board or the schools that are presently involved with the program will expand from a few classrooms to several. The team decided that instituting Risk Watch in local schools is going to be a long-term endeavor, and regardless of the original project forecast and grant funding, we are in this for the long haul.

### **Outcome**

- A Risk Watch Northern California Coalition has been formed.
- A CVEMS Risk Watch multi-disciplinary overhead management has been established.
- Both the Coalition and management team have committed to continue program implementation efforts regardless of EMSA grant funding.

- Risk Watch teacher guides, student lesson books and assorted art supplies have been purchased and distributed to various schools and agencies.
- Risk Watch Injury Prevention modules are being taught in Marin, Mendocino, Napa & Sonoma schools.

## Conclusion

From a literal viewpoint, the Risk Watch Project was and is successful. The proposed objectives were met. The program is up and running, albeit not in as many schools as originally hoped. From a viewpoint of expectations being met, the project gets a mixed vote. Our primary disappointment was the difficulty encountered in getting schools (actually the principals and superintendents) to follow through on their commitments. The State budget difficulties really threw most school administrators for a loop. It was very hard to convince the administrators to initiate a new program when they were totally absorbed with drawing up lay off lists. It was this particular phenomenon that caused the project team to “let go” of our internal goal of establishing the program across the board in one year’s time. Fortunately, both the coalition members and overhead management team members believe that Risk Watch is a good program and are committed to continuing to advocate for the programs institutionalization in our local schools.

As far as the project and process of implementing the Risk Watch program, the Agency recommends:

- Establishing a coalition of multi-disciplinary entities is essential.

- Having at least one fire department as a coalition member that has an active membership with NFPA is mandatory. The NFPA will discount Risk Watch materials for NFPA members.
- When ordering Risk Watch materials, order in bulk to take advantage of volume price breaks.
- Ordering student workbooks by grade levels in large volumes so that the teachers can continue the program into the future should you not be able to replace the grant funding that bought the supplies originally.
- Recruiting a risk manager from the school system if you can’t recruit a teacher or administrator to be a coalition member.
- Keep your coalition members linked and informed through regularly scheduled meetings & email list servers.
- Encourage schools to incorporate the Risk Watch curriculum in the fashion that best suits them, be it once a week, once a month or one day—all day.
- Using the one-day — all day approach, it allows participation by coalition members as adjunct teachers and usage of public safety equipment for display purposes.
- When approaching the schools regarding the program adoption, do so during the spring quarter or fall quarter. Avoid the holiday and vacation periods, no one’s around.
- If there is a Safe Kids coalition, join forces with them.

- Using student interns, be they from a fire department, law enforcement agency (crime prevention unit) or health department. This project takes consistent attention and an intern can provide that.

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## Medication Education for Drug Safety (MEDS)

**Grantee:**

Contra Costa County EMS Agency

**Project Number:** EMS-2051

**Project Period:** 07/01/02-09/30/03

**Project Amount:** \$21,012.00

**EMS Administrator:**

Art Lathrop

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Martinez, CA 94553

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### Introduction

The Medication Education for Drug Safety (MEDS) project is a positive addition to a comprehensive countywide injury prevention effort offered through Contra Costa Health Services, Emergency Medical Services Agency in conjunction with John Muir Medical Center. The project's mission is to address the unique medication issues of older adults in an effort to reduce the number of preventable injuries to this population in Contra Costa County.

### Project Description

This project has enabled John Muir Medical Center's Trauma Service to develop and implement a very important aspect of their Senior Injury Prevention Program. The MEDS project provides a mechanism to educate older adults about their medications, including the purpose, side effects, and drug-drug interactions. Utilization of an on-line computer program to evaluate an individual's medications made the investigation of interactions possible. The questionnaire that was developed provides information about an older adult's perception of their relationship with healthcare providers as well as knowledge about their medications. The project also provides educational outreach to the community. Multiple presentations were given at senior centers, faith-based settings, residential care facilities, and acute care settings.

### Tasks/Methodology

**Objective 1:** Development and implementation of the Medication Education for Drug Safety (MEDS) program.

- A. Provide education about the medications an older adult takes as it relates to side effects, duplication, and the intended purpose of each medication and possible drug-drug interaction.
- B. Send medication and interaction information to the individual that can be used to review medications with their primary physician.

**Objective 2:** Increase public awareness about possible drug/drug, drug/food interactions.

- A. Publish in community newsletters to educate the public about drug/drug and drug/food interactions.

**Objective 3:** Evaluate an individual's perception of their medications and relationships with their physicians and pharmacists.

- A. Using an outcome evaluation tool determine an older adult's baseline awareness of current knowledge of their medications. Also obtain possible polypharmacy profiles and investigate the number of physicians a person utilizes.

**Objective 4:** Identify individuals at risk for injury due to polypharmacy.

- A. With the use of the evaluation tool and medication review program be able to identify individuals at risk and refer them back to their physician for further follow-up.

**Objective 5:** Utilize older adults with medical backgrounds to provide the medication review program to all of Contra Costa County.

- A. Train older adults with medical backgrounds to use the program. Offer at least one training the first year and utilize them to aid in providing service and obtaining post evaluation data.

**Objective 6:** Establish and maintain a process for continued collection and analysis of data to support pertinent intervention strategies and to gauge project impact on reducing occurrences and severity of older adult injuries caused by medications.

- A. Data obtained from the Emergency Department at John Muir concerning injuries to the older population will be compared on a yearly basis.
- B. Develop a database to record and analyze data from medication review and evaluation tools on an annual basis.

## **Outcome**

Increasing public awareness about possible drug/drug and drug/food interactions was a major focus. Over 570 people were informed through presentations in the community. The project coordinator participated in a CCTV program “Senior Information Journal”. CCTV reaches over 350,000 cable subscribers. Fall prevention

and proper medication management was discussed during the program.

An outcome evaluation tool was developed to determine an older adult’s baseline awareness of their medication knowledge. While performing medication reviews, several individuals were identified at risk for medication related issues and were referred to their physician. Empowering older adults to be effective consumers has been a significant aspect of the program.

A system was established for maintaining and analyzing data obtained from the Emergency Department at John Muir for related injuries of the older population. Data will be compared on a yearly basis. By working with a clinical analyst from the Emergency Department it was determined that 30-35% of the older adults that arrived at the Emergency Department had either fallen or were at risk for falling sometime in the near future, based on grouping their chief complaints (injury to lower extremity, syncope, etc.).

## **Conclusion**

The project’s mission is to address the unique medication issues of older adults in an effort to reduce the number of preventable injuries in Contra Costa County. This goal has been fulfilled if the evaluations received about the program are any indication. The net impact of the project on the overall operation of the EMS system is potentially significant. The increased awareness of the issues surrounding polypharmacy will decrease older adults accessing the EMS system for medication related (falls, medication reactions) problems. Most of the participants feel that the health care industry is in a hurry to provide care and doesn’t have enough time to provide the hands-on attention that they need and appreciated the opportunity to speak

to a R.N. who takes time to discuss their health care concerns in a safe environment. The MEDS project has improved the quality of life for many individuals in our community.

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## Trauma Plan Implementation

**Grantee:**

Inland Counties EMS Agency (ICEMA)

**Project Number:** EMS-2052

**Project Period:** 07/01/02-06/30/04

**Project Amount:** \$64,472.00

**EMS Administrator:**

Diane Fisher

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San Bernardino, CA 92415

(909) 388-5823

### Introduction

In the early 1980's, the American College of Surgeons guidelines was by a committee of local surgeons to designate trauma centers within the ICEMA region. In the mid 1990's, a draft Trauma System Plan was drafted and distributed for public comment. The plan did not continue through the approval process due to lack of a funding source for implementation of the plan, which included the lack of personnel to oversee the administration of the plan. In 2001, ICEMA secured funding to add the position of Trauma Coordinator to develop and implement a Trauma System Plan consistent with State regulations, including re-verification of the two existing Trauma Centers, Loma Linda University Medical Center (Level I) and Arrowhead Regional Medical Center (Level II) and designation of a Level I Pediatric Trauma Center. A collaborative relationship has been established between the Trauma Centers; the consequences of traumatic injury and the need for established and financially viable trauma centers has been recognized as a public health issue and gained recognition with community leaders.

### Project Description

The purpose of the grant was to support efforts to develop a comprehensive trauma system.

The major objectives were:

- To verify that Loma Linda University Medical Center (LLUMC) met the standards set forth by the State and ICEMA for a Level I adult and pediatric trauma center.
- To verify that Arrowhead Regional Medical Center (ARMC) met the standards set forth by the State and ICEMA for a Level II adult trauma center.
- To develop and implement a pediatric trauma system within the region.
- To develop a regional trauma database in order to analyze trauma registry data.

### Tasks/Methodology

Monthly meetings were established with Trauma Coordinators from LLUMC and ARMC to determine dates and methodology for site visits. Applications were developed and provided to each of the two existing trauma centers. A consultant was hired to assist in the review process as well as the site visits conducted the latter part of June 2003.

Revision or addition of trauma protocols was done in coordination with various ICEMA committees and submitted to each EMCC for recommendations.

The two Trauma Centers utilize Collector software for their trauma registries. Arrangements were made to purchase Collector software capable of querying and

analyzing data from both centers. The data set to be utilized was reviewed and agreed upon for downloading to ICEMA. Training dates were established for ICEMA staff and trauma center staff.

The Trauma Evaluation Committee (TEC) met and reviewed indicators and filters.

### **Outcome**

- The ICEMA Governing Board reaffirmed LLUMC as a Level I Adult Trauma Center, designated LLUMC as Level I Pediatric Trauma Center and reaffirmed ARMC as a Level II Adult Trauma Center on July 27, 2004.
- Revised and/or new adult and pediatric trauma protocols were approved by the Medical Director and Health Officers of each member county. Projected implementation date for these protocols is September 1, 2004.
- Collector software was purchased and installed on ICEMA computers.
- Trauma Centers are downloading data to be utilized by the ICEMA Trauma Coordinator and appropriate staff to evaluate the trauma system.
- Appropriate ICEMA staff and trauma center staff were provided training.
- An audit is currently in progress with 13 filters in place being monitored for a 6-month period. The timeline estimated for completion for the first region-wide report on trauma is January 2005.

### **Conclusion**

The results of this project have resulted in assurance that the ICEMA trauma system complies with State regulations and provides a mechanism for on-going evaluation of the trauma system. It is anticipated that the ability to evaluate the trauma system based on data from the trauma registries will be invaluable in regional assessment of the system as well as future development of a rural trauma system utilizing the expertise of the members of the Trauma Evaluation Committee through a structured, well defined process.



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## Emergency Medical Dispatch Completion Project

**Grantee:**

Merced County EMS Agency

**Project Number:** EMS-2053

**Project Period:** 07/01/02-06/30/03

**Project Amount:** \$21,045.00

**EMS Administrator:**

Chuck Baucom

260 East 15<sup>th</sup> Street

Merced, CA 95340

(209) 381-1255

### Description

Merced County was the first EMS system in the State to utilize a private ambulance service, via contract with the County, to function as the Secondary PSAP for medical emergencies. As the State only locates 911 Positron equipment on government property, the County was faced with a dilemma when the county fire department announced in 1988 that they were going to discontinue medical dispatching due to budget constraints. Riggs Ambulance Service (RAS) offered to take over the medical dispatch operation, and the County leased the dispatch center property to allow the location of the 911 Positron equipment.

The County decided to replace the locally developed medical dispatch card system in 2000, and RAS purchased the "hard-card" version of the Clausen System (Medical Priority Dispatch). This project focused on enhancing the medical 911 dispatch center with the computer versions of both the "ProQA" dispatch software and the "Aqua" quality assurance software, which have become the industry standard for medical dispatch centers.

### Project Description

This special project implemented a state-of-the-art dispatch system for the County, which included both the call-taking software as well as the necessary quality assurance software for the system oversight. This

replaced a locally-developed system that has been in place since 1985. The Medical Priority Consultants (Clausen System) products are the national standard for medical dispatch centers, and the addition of the related computer software components enhanced the existing "Clausen Hard-card" system. The specific objectives for the project were as follows:

1. To solicit a final bid from Medical Priority Consultants for the purchase of dispatch software.
2. To purchase the ProQA and Aqua software.
3. To review and amend existing dispatch policies and agency oversight process.
4. To schedule and conduct the dispatch center staff training and management training.
5. To integrate the new dispatch software with the existing CAD system.
6. To amend current QI practices to incorporate the new dispatch system

### Tasks/Methodology

A steering committee was established to assist the agency with the completion of the proposed objectives. Agency staff coordinated the activities with the affected organizations and provided feedback to the

Steering Committee on a regular basis. Policy and procedural changes were developed by the steering committee and reviewed and approved using the established Policy and Procedure Committee process. All training was coordinated through the vendor, Medical Priority Consultants (MPC) and completed locally. EMS Agency staff was also trained in the software to facilitate the oversight and review responsibilities.

## **Outcome**

The addition of the ProQA and Aqua software has provided an enhanced objective dispatching process and analysis of dispatcher performance. It has improved our ability to standardize the review process and provides a fair and consistent evaluation of dispatch performance. We have achieved a long-time goal of integrating dispatch activities into the overall system QI process and now have an objective way to accomplish that dispatch review portion.

Once fully integrated<sup>1</sup> with the CAD system, we will be able to query the system and determine the effectiveness of the priorities established. We anticipate that integration will be completed by November 2004.

## **Conclusion**

This project has allowed Merced County to fully convert the Medical Dispatch Center priority card system to a computer-based operation, with the hard-cards only for backup

<sup>1</sup> Full integration will be accomplished once the ProQA event number is automatically inserted into the record number for the CAD incident. Two fields are available in the CAD system to facilitate that integration.

purposes. The dispatch operations are now reviewed on a regular basis through the

system IQ process and dispatchers are provided with regular feedback regarding their performance.

All of this has led to improved performance and improved dispatcher satisfaction, as they feel that this new review process is more objective in nature. Future changes to the medical priorities can be driven by data and not simply subject to anecdotal speculation.

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## Rural/Remote Terrorism Planning and Response

**Grantee:**

NorCal EMS Agency

**Project Number:** EMS-2054**Project Period:** 07/01/02-06/30/03**Project Amount:** \$80,000.00**EMS Administrator:**

Dan Spiess

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(530) 229-3979

### Introduction

Even as terrorism planning and response became more important than ever in California, funding for these efforts, especially in rural areas, became increasingly challenging. OES Mutual Aid Region III was one of two rural regions (the other being Region IV) selected to receive funds under this project to develop regional terrorism response plans and to support local planning and preparedness.

Region III had no such plan in place.

### Project Description

The two-year project seeks to develop a regional terrorism response plan that addresses contemporary hazards, vulnerabilities, terrorist methodologies and consequences. Importance was also placed on providing support for the planning and response efforts of the region's 13 counties and the jurisdictions within them. The project also provides for 24-hour-on-call coverage by local EMS agency staff for disaster and terrorism response support.

Major objectives were:

1. To create a regional disaster medical/health plan to respond to an act of terror or other medical disaster.
2. To act as a resource to operational area medical and health planners.

3. To establish and/or continue liaison with regional disaster planners and organizations.
4. To participate in the DMAT and MMRS programs as follows: Liaison with one or more neighboring DMAT to improve the regional understanding of those systems and determine potential benefits and operational issues.
5. To attend disaster training and educational opportunities to maintain and develop professional skills.
6. To provide the EMS Authority with information/reports.
7. To provide 24-hour on-call staffing throughout the project period.

### Tasks/Methodology

Many project tasks were accomplished through extensive participation in local, regional and state meetings and through coordination of quarterly meetings specific to disaster medical and health issues in the region. Quarterly meetings were organized specifically to meet the needs of those attending with participants having significant input regarding meeting scheduling, duration, location, subjects of presentations, group activities and other features. A favorite feature among attendees was the working lunch, during which each agency present provided an update, and often posed questions

or challenges for discussion by the group. Feedback on this activity was extremely positive, citing the opportunities for those present to learn from the entire group.

A planning strategy was devised that uses the staffs of both Region III and IV to cooperatively develop processes and products, using Region IV's multi-casualty incident plan as a basis. Staffs met several times and communicated many times through the year.

Educational objectives were met through participation in courses and conferences and through independent study of project staff.

## **Outcome**

The first year of this two-year project was intended to develop a foundation for plan development and to support local and regional planning, and we consider these efforts a success. Many county agencies and their leadership have become increasingly aware and capable in project subject areas and have come to view the LEMSA and project staff as an important resource for training, information, coordination and other support. DMAT and MMRS programs are now better understood in the region, as are the opportunities for those in this region to support them. The educational objective was met and exceeded, all reports specified were provided, and on-call staffing was uninterrupted through the year.

## **Conclusion**

The project succeeded in each objective, developing a foundation for sound terrorism response planning in Region III, establishing an effective relationship with key local organizations and individuals and providing support for local efforts to develop effective plans.

At its midpoint we consider the project to be on track for successful completion in its final year.

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## Prehospital Multi-Casualty Incident/Disaster Preparedness

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**Grantee:**

North Coast EMS Agency

**Project Number:** EMS-2055

**Project Period:** 07/01/02-03/31/04

**Project Amount:** \$59,000.00

**EMS Administrator:**

Larry Karsteadt

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(707) 445-2081

### Introduction

The Prehospital Multi-Casualty Incident/Disaster Preparedness Project was initiated to enhance the emergency response to a multi-casualty incident in the North Coast EMS Region. The region is comprised of Del Norte, Humboldt, Lake and southern Trinity counties in northwestern California. The counties are largely rural in nature with motor vehicle accidents the most likely cause of a multi-casualty incident. Prior to this project there was no formal MCI Plan in place for the region.

### Project Description

The project sought to develop a formal MCI Plan and to incorporate the plan in each county's emergency operations plans. Several MCI exercises were conducted in such a way as to encourage maximum participation of emergency responders. Equipment needs were identified in each county and specialized MCI planning equipment was acquired and distributed according to those needs. An MCI conference was presented which introduced the new MCI Plan as well as offering presentations on the Incident Command System, Standardized Emergency Management System, roles of first responders at an MCI, management of an MCI, Disaster Medical Assistance Teams (DMAT), planning an MCI exercise and international MCI response.

### Tasks/Methodology

A steering committee consisting of representatives from private ambulance providers, fire departments, public health departments, and the North Coast EMS agency was formed to direct the project. The Northern California Safety Consortium (NCSC) was contracted as project coordinator and addressed eight (8) primary objectives.

### Outcome

A Multi-Casualty Plan was developed and is currently out for public comment. Exercise plans for an aircraft accident, bus accident and a bioterrorism event were developed. Two functional MCI exercises focused on prehospital providers were conducted and evaluated, one in Humboldt and one in Lake County. A standardized MCI evaluation instrument was developed as well as a patient tracking tool. Presentations made at an MCI conference conducted in Humboldt County are available for presentation throughout the region. Providers in the region have equipment and supplies that will allow them to enhance their training and response to an MCI event.

### Conclusion

The Prehospital Multi-Casualty Incident/Disaster Project will enhance response to multi-casualty incidents in the North Coast EMS region. The MCI Plan offers a framework upon which each responder agency can develop their own MCI response capabilities. The training programs

that were developed and the MCI planning equipment that was brought to the region will aid this preparation. The exercises brought together multiple agencies that do not often interact and enhanced communication between them. The project can now be expanded to address disaster response and to incorporate further responsibilities recommended as part of the National Incident Management System.

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## Rural Outreach Medical Training

**Grantee:**

North Coast EMS Agency

**Project Number:** EMS-2056**Project Period:** 07/01/02-12/31/03**Project Amount:** \$65,000.00**EMS Administrator:**

Larry Karsteadt

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(707) 445-2081

### Introduction

The Rural Outreach Project was designed to provide education for first responders in a rural community where ambulance response times are frequently in excess of one hour. The three and one-half counties covered by the grant are primarily served by small volunteer fire departments with limited access to training. There was also a recognition that since some departments were very isolated, that there would be wide variations in quality and consistency of training. The purpose of the project was to take first responder training and focused continuing education courses out to those communities. Under the project we held first responder training in all three counties and developed a continuing education syllabus that can be used for standardized continuing education training in the future.

### Project Description

The Rural Outreach Medical Training project held seven full first responder courses and three Pediatric Emergencies for Prehospital Personnel (PEPP) in three counties. A focused continuing education syllabus containing eight training modules was developed and distributed to first responders and training agencies in all three and one-half counties. Strategies were developed for future training needs in each community and the potential for additional first responder training and continued education was discussed.

### Tasks/Methodology

The project utilized a combination of local paramedics and outside subcontractors to conduct first responder courses and continuing education courses. All courses were held at sites determined to be the most likely to draw rural first responders. The topics in the continuing education syllabus were selected based upon survey results and steering committee meetings. The training manual was reviewed by each of the steering committee participants and changes were made according to their comments.

### Outcome

Ninety-six new first responders were trained in the region and three PEPP classes were held. The focused continuing education (CE) syllabus was completed and distributed. We were unable to complete the CE courses as planned due to a late start and the failure to obtain a final extension.

### Conclusion

The project was successful in its goals to increase the number of trained and certified first responders in the area. The continuing education syllabus will help ensure that the training is reinforced and that standardized training will continue. It is unfortunate that the project deadline and holidays cut short the CE courses and we were unable to finish that portion of the project. Perhaps future special

project funding will be available to continue  
this important project.



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## Statewide Evaluation of EMS-C

### Grantee:

Riverside County EMS Agency

**Project Number:** EMS-2061

**Project Period:** 10/01/02-12/31/03

**Project Amount:** \$124,000.00

### EMS Administrator:

Michael Osur

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Riverside, CA 92503

(909) 358-5029

### Introduction

Although over \$2,000,000 has been provided by the Emergency Medical Services Authority (EMSA) to Local Emergency Medical Services Agencies (LEMSA) in California for Emergency Medical Services for Children (EMS-C) development and implementation since 1990, it has been difficult to make an assessment of EMS-C statewide. This is due to the large number of LEMSAs, the selection of different EMS-C components for development, and the variety of methods of EMS-C implementation.

The purpose of this project was to provide a picture of EMS-C in California for several reasons: 1) to serve as a baseline for ongoing assessment, 2) to identify highly successful programs that could be replicated by other agencies, 3) to identify factors that may serve to promote successful EMS-C implementation, and 4) so that technical support from EMSA could be targeted to the areas where further EMS-C development would be most helpful.

### Project Description

The first year of the project involved 1) recruitment of a committee to oversee project activities, 2) development of instruments for assessment, including assessment of pediatric trauma systems, care of children with special health care needs, family-centered care, and cultural diversity issues. Disaster preparations for children were also added to

the assessment, although not a part of the original project. The second year of the project involved assessment visits to LEMSAs throughout the State, data collection, data entry, and data analysis.

### Tasks/Methodology

Information obtained from a survey of the EMS-C Coordinators was used to develop the assessment process in collaboration with the Emergency Medical Services Committee (EMSC) and the Technical Advisory Committee (TAC) of EMSA. The second year of the project involved site visits to 24 of the 32 LEMSAs in California to determine the status of EMS-C. Many LEMSAs identified the need for more information about the status of data collection and data sharing in other systems, so the questionnaire used for the assessment asked a variety of questions about that issue. Also, many were interested in how EMS-C was funded in other agencies, and who was included on the EMS-C Advisory Boards. These questions and others identified by the EMS-C Coordinators and the TAC were included on the assessment questionnaire. The questionnaire was piloted in three agencies: North Coast, Riverside, and Ventura. Questions that were unclear were revised, and some questions were omitted. The questionnaire was then ready for use in the remaining 21 agencies scheduled for site visits.

### Outcome

Site visits were scheduled for 2003 and 2004, and completed in July of 2004. Although the original intent was to have the two project investigators visit most of the LEMSAs, the death of James Seidal, MD, PhD during the second year of the grant allowed only one investigator to finish the data collection. During most of the visits, the EMS Director was present, and in many cases other staff members involved in EMS-C were included. The questionnaire results were tallied, and any areas of inconsistency were clarified by telephone consultation.

The following agencies gave generously of their time for this assessment:

Coastal Valleys, Fresno-Kings-Madera, ICEMA, Los Angeles, Marin, Merced, Monterey, Mountain-Valley, Northern California, North Coast, Orange, Riverside, Sacramento, San Benito, San Diego, San Joaquin, San Luis Obispo, San Mateo, Santa Barbara, Santa Clara, Santa Cruz, Sierra-Sacramento Valley, Tuolumne, and Ventura

Agencies that did not receive a site visit included:

Alameda, Contra Costa, El Dorado, Imperial, Kern, San Francisco, Solano, and Tulare

## Conclusion

A full report developed from the questionnaire was provided to the EMS Authority and to the Technical Advisory Committee. Some of the points were:

- 1) Nine LEMSAs have a designated position for EMS-C, such as EMS-C Coordinator. Of these, only two are described in regulations, and only three have funding to support the position.

- 2) Seven LEMSAs have EMS-C Committees or Advisory Boards that meet regularly.
- 3) The age definition of a pediatric patient varies by agency, with a range from 8 years to 16 years of age.
- 4) Many agencies (19/24) provide some continuing education specifically addressing pediatric issues. 20 provide SIDS training and 12 provide training in coping with child maltreatment. Only 2 agencies provide training in family-centered care, and only 6 provide training in coping with families/family support.
- 5) Almost all agencies (23/24) have lists of pediatric equipment for EMS personnel, and most of those (18) are integrated with the adult equipment list.
- 6) All LEMSAs have protocols or guidelines for pediatric patients.
- 7) Seven LEMSAs use pediatric seat restraints and/or car seats for transport of pediatric patients.
- 8) Sixteen LEMSAs categorized or verified facilities such as Emergency Departments, and Pediatric Critical Care facilities in their EMS systems.
- 9) In twenty LEMSAs, EMS personnel are involved in illness and injury prevention programs.
- 10) In 3 LEMSAs, dispatchers are given special training in EMS-C.
- 11) Many (21) LEMSAs are involved with community organizations in working on pediatric issues, including American Red Cross, Ambulance providers, SafeKids, and Mental Health agencies.

Responding to questions about the barriers to EMS-C integration, LEMSAs most often cited financial barriers, lack of staffing, lack of regulatory authority to implement EMS-C, and political issues. Effective components cited by the LEMSAs included injury prevention, quality assurance and data collection programs, treatment protocols, and collaborative efforts between LEMSAs and local hospitals.

Some of the recommendations for program improvement were to increase the length of time for EMS-C implementation (3 year grants), offer short (18 mo.) “tune-up” grants, provide regulatory support for pediatric education, protocols, and equipment, encourage the use of the “Step by Step” handbook, and continue State leadership for meetings of the EMS-C Coordinators.

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## Toolkit for Elderly Suicide Prevention

**Grantee:**

San Diego County EMS Agency

**Project Number:** EMS-2058

**Project Period:** 07/01/02-06/30/03

**Project Amount:** \$42,946.00

**EMS Administrator:**

Gwen Jones

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### Introduction

Suicide is the leading cause of injury death in adult men in San Diego County. In 1999, nearly 30,000 people committed suicide in the United States, accounting for more deaths than any other single non-natural cause of death. Suicide rates increased with age and were highest among the population aged 65 years and older (15.9 suicides per 100,000 population, compared with 10.7 per 100,000 for all ages combined). In contrast to the number of completed suicides, older adults have been shown to have the fewest attempts for each completed suicide. This means that when an elderly person attempts suicide, he is much more likely to employ a more lethal method such as a firearm.

Within the older age group, demographic characteristics that have demonstrated increased risk for suicide include male gender, white race, and being married. According to data from the Centers for Disease Control for 1999, the rate for men in this age group was more than 7 times that for women and whites were 2.6 times more likely than non-whites to commit suicide. In 1992, the national rate for elderly divorced or widowed men was 2.7 times that for married men and 1.4 times that for never-married men.

### Project Description

The goal of this project was to develop materials to guide local emergency medical services agencies (LEMSAs) in the

assessment of elderly suicide in their communities and to provide them with locally oriented resources to develop elderly suicide prevention efforts. This project sought to address the need for data collection guidance for LEMSAs who desire to assess the impact of elderly suicide in their communities.

This project created a resource toolkit for elderly suicide prevention developed specifically for LEMSAs that guides the agency through the process of collecting and analyzing their suicide data, identify the risk factors for elderly suicide and resources available for suicide prevention. An electronic data template was developed to facilitate data collection. In addition, this toolkit included comparable state and national statistics for use by local agencies. This project identified what data resources are available at the county level and how to access them. This toolkit was designed to be posted on the California EMSA website to facilitate access.

### Tasks/Methodology

- Develop a suicide data directory. Project staff assessed publicly available sources of suicide data in each county in California and compile listings of types of data available by source.
- Develop a suicide data template. Project staff defined relevant data that were available at the local level and created an

electronic tool to guide LEMSAs through data collection and compilation.

- Develop a list of risk factors. Project staff analyzed detailed suicide data to define risk factors for elderly suicide, statistically tested and refined the risk factors and created an issue guide that discusses these risk factors and corresponding prevention opportunities written for emergency medical personnel.
- Develop an Elderly Suicide Prevention toolkit for LEMSAs. Project staff survey state and national resources for information on elderly suicide prevention, focusing on activities appropriate for local level programs. They packaged the data directory, data template and risk factors with information on state and national suicide data and resources for distribution to LEMSAs. Project staff provided an internet ready version of the Elderly Suicide Prevention kit to the California EMS Authority for posting on the web site. Project staff also promoted the project through attendance at state and national meetings.

## **Outcome**

The project resulted in the development of the Elderly Suicide Prevention Toolkit. This toolkit gives the user a basic overview of suicide among the elderly, a resource directory, a data resource guide and a spreadsheet tool to enter local data in and produce relevant statistics and a guide to using the data to make a case for local suicide prevention. The project also included identifying the risk factors for elderly suicide.

It is a stated goal of the EMS Authority to encourage and facilitate the involvement of the thousands of California EMTs and Paramedics, and their employers and providers, in the essential roles of prevention advocate and educators in their respective communities and organizations. Suicide prevention, specifically among the elderly, was identified as a need by the Injury Prevention and Public Education Committee during the EMSA Vision process. The Committee placed a strong emphasis on data collection and the use of local level data in injury prevention activities. The final product of this project walks the user through how to collect, analyze and compare their data with other counties, state and national data. The basic spreadsheet was designed to be replicated and can be used for other injury prevention activities and for other age groups.

## **Conclusion**

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## Emergency Medical Services for Children (EMS-C)

**Grantee:**

San Diego County EMS Agency

**Project Number:** EMS-2062

**Project Period:** 10/01/02-03/31/04

**Project Amount:** \$84,998.00

**EMS Administrator:**

Gwen Jones

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San Diego, CA 92120

(619) 285-6429

### Introduction

The County of San Diego's Emergency Medical Services agency, a Division within Public Health Services of the Health & Human Services Agency, has had a long history of providing pediatric programs. In 1984 the County instituted a trauma system, which included designating a pediatric trauma center. During the first year of the Emergency Medical Services for Children (EMS-C) grant, an advisory board was implemented to provide expert advice to guide the EMS-C program evolution. The second grant-year projects were more complex and related primarily to guidelines, systems development and community integration requiring the involvement of multiple agencies.

### Project Description

The goal of the County of San Diego was to implement an EMS-C program to improve the emergency medical services and healthcare resources available to the children of the County. Currently in San Diego County there are 22 hospitals with Emergency Departments, which include eight Base Hospitals and six Trauma Centers (5 Adult, 1 Pediatric). There are 27 Paramedic Agencies and 20 Emergency Medical Technician (Basic) Agencies employing 1,000 Paramedics and 3,000 EMT's. Many of the structural and administrative goals of the EMS-C implementation grant were

accomplished during the first year of the grant. On-going processes were established for reviewing pediatric protocols, ambulance agency equipment lists and other processes. The second year of the grant focused on larger more complex projects that required preliminary assessment and alignment of multiple participating agencies. Major objectives during the second year included developing pediatric guidelines, pediatric quality indicators, and a prehospital information system for children with special healthcare needs.

### Tasks/Methodology

The County of San Diego established the EMS-C Program administrative framework by designating an EMS-C Coordinator with support services for clerical, epidemiological and international communications. An EMS-C Advisory/Steering Committee was established by policy and routinely met to evaluate various aspects of pediatric emergency healthcare preparedness and prevention. The EMS-C Coordinator facilitated meetings with representatives of facilities, agencies, community groups and subcommittees on a variety of project topics. These projects were primarily accomplished through stakeholder participation and consensus gathering techniques. Locally completed projects that were seen to have value on a statewide basis were distributed to other local EMS agencies for their consideration.

The development of the “Emergency Guidelines for Schools” was seen as a statewide need and was presented to the California EMS-C Coordinators as a statewide project in 2002. Alameda County joined San Diego County in piloting and promoting the guidelines. The California Emergency Medical Services Authority (EMSA) will distribute the Emergency Guidelines for California Schools for public comment in April 2004 prior to it becoming a state document.

### **Outcome**

The County of San Diego’s EMS-C program saw the completion of several major projects during its second year. Projects that were completed and distributed during the 2<sup>nd</sup> year of the grant included:

- Safe transport Guidelines (distributed statewide)
- Emergency Medical Information Form/Packet (distributed statewide)
- Emergency Department Pediatric Guidelines
- Emergency Guidelines for California Schools (EMSA approval pending)
- Pediatric Quality Indicators
- Increased the number of pediatric emergency care educational opportunities in San Diego County

These projects required significant engagement by multiple agencies, physicians, and public entities in order to successfully be adopted with support of involved parties.

### **Conclusion**

San Diego has a long history of providing the community with support necessary to create positive changes in standards of care and prevention efforts. The EMS-C Program implementation has provided the County of San Diego an opportunity through which multiple community needs and opportunities have been identified and many addressed. The integration of a broad vision of how the local Emergency Medical Services Agencies can interact with the community created opportunities to initiate projects that directly impacted the target audience. The EMS-C grant has supported several projects that will have an enduring impact on children throughout California.

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## Capitol Corridor Terrorism Planning and Response

**Grantee:**

San Joaquin County EMS Agency

**Project Number:** EMS-2059

**Project Period:** 07/01/02-06/30/03

**Project Amount:** \$80,000.00

**EMS Administrator:**

Darrell J. Cramphorn

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Stockton, CA 95201

(209) 468-6818

### Introduction

This project was developed to improve the ability of the 11 counties in Region IV (Alpine, Amador, Calaveras, El Dorado, Nevada, Placer, Sacramento, San Joaquin, Stanislaus, Tuolumne and Yolo) to plan and respond to the medical and health consequences of a terrorist event.

### Project Description

In order to improve the ability of the 11 counties in Region IV to plan and respond to the medical and/or health aspects of a terrorist event within or affecting the region, the project sought to use several different approaches to enhance preparation. The primary activities designed to enhance regional preparation included:

- Enhancing medical and health planning in each county within the region. The RDMHS was to be used as a resource to each county to assist with local planning.
- The RDMHS was required to liaison with other regional planners and attend regional MARAC meetings and share information obtained at these meetings with local planners.
- The RDMHS was required to create and keep current a contact list of the Medical Health Operational Area Coordinators (MHOACs) and make this available to EMSA.

- Working with local, state and federal planners, the RDMHS was to create a regional disaster medical/health plan to assist local and regional planners both in preparation for, and response during a large event affecting the region.
- To ensure that the RDMHS was well informed and could effectively act as a resource to assist local planners, the RDMHS was required to attend several specific educational and training opportunities during the project period.

### Tasks/Methodology

To meet the objectives of this project, the RDMHS began by meeting with key medical and health disaster planners within the individual counties in Region IV. These meetings provided the RDMHS with a chance to meet and develop relationships with key personnel within each county; this also allowed the RDMHS to collect information about local disaster medical/health preparation and planning efforts. These meetings also allowed the RDMHS to hear what local planners needed and hoped to gain from the RDMHS and regional planning.

In addition to local meetings, the RDMHS hosted 4 quarterly meetings during the project period. These meetings included both local and state disaster medical/health planners.



The quarterly meetings were used to share information on a wide variety of medical/health related disaster topics including grants, exercises, local plans, regional planning, updating contact lists, training and other topics. Both the attendance and content of these meetings grew throughout the year.

A key topic in both the local and quarterly meetings was regional planning. Early in the project period a consensus of the regional planners decided to use the existing Region IV Mass Casualty Incident Plan as a foundation for an all hazards medical health disaster plan. Discussions on updating and expanding this plan were topics covered at each quarterly meeting.

Using contact information collected during individual and quarterly meetings, the RDMHS set up email lists and used these lists to disseminate information to local medical and health planners throughout the year.

During the project period the RDMHS attended several conferences and training classes to enhance knowledge of medical/health, and general disaster planning and response issues. The knowledge obtained assisted the RDMHS in being an effective resource to local planners.

## **Outcome**

During the project the tasks and methodologies discussed proved to be successful in enhancing Region IV's preparation for a terrorism event. By meeting and assisting local planners with local efforts, the RDMHS was able to promote and enhance preparation at the local level. Quarterly meetings were used as an important forum for local, state and other planners to discuss issues—enhancing both the local and regional preparation for a terrorist event. During both

local and regional meetings, progress was made on revising and expanding the current Region IV Plan into a complete medical/health disaster plan. The local and regional contacts and meetings developed during the project period will be used to continue and complete this process in the future.

## **Conclusion**

This project enhanced local and regional preparation for terrorism. By building relationships with key local planners and enlisting their attendance and participation in regional meetings and activities, the infrastructure for continued regional planning has been built. Although the final regional disaster medical/health plan has not been completed, work has begun and will be completed with the infrastructure that was built during this project.

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## Trauma System Funding Research

**Grantee:**

Sierra-Sacramento Valley EMS Agency

**Project Number:** EMS-2063

**Project Period:** 10/01/02-06/30/04

**Project Amount:** \$90,598.00

**EMS Administrator:**

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### Introduction

California does not have a true statewide trauma system and lacks dedicated, earmarked funding to develop a statewide trauma system. This grant was intended to update the document “California’s Trauma Care: In Crisis” for trauma system funding and to address the issues of California’s trauma system.

### Project Description

A consultant, Virginia Hastings, was hired to facilitate the gathering of information needed to update the white paper. Ms. Hastings was selected because of her knowledge of EMS and expertise of trauma system planning within the State. A graphic artist developed the state map and a graphic showing the components that have been updated since the last map.

### Tasks/Methodology

A project team was identified which consisted of trauma surgeons, lobbyists, board of supervisors, EMS administrators, hospital administrators, nurses, fire department personnel and hospital council. The team met four times to review information received from surveys, state law, funding expenditures and the content of the paper.

An analysis of the first Trauma Care Fund allocation illustrating how each trauma center utilized the funds to improve the delivery of

trauma care was reviewed by the consultant and presented to the project team. Local EMS Agency Administrators that had received California Trauma Care Funds were surveyed to determine the impact that California Trauma Care Funds had on their trauma systems.

### Outcome

S-SV has updated the white paper “California’s Trauma Care: In Crisis”. The updated white paper titled “California’s Trauma Care Trauma Fund Utilization: A Follow-Up Report to the California Legislature” discussed the expenditures of the Trauma Care Fund essential to maintaining their current trauma systems and the improvements that were permitted as a result of the funding and also identified future funding sources.

### Conclusion

California continues to remain without a legislated statewide trauma system to care for the victims of critical injury. California lacks dedicated earmarked trauma funding sources and without this mandated funding trauma care in California will continue to be fragmented.

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## Emergency Medical Communications System Improvement

**Grantee:**

Tulare County EMS Agency

**Project Number:** EMS-2060

**Project Period:** 07/01/02-06/30/03

**Project Amount:** \$24,797.00

**EMS Administrator:**

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### Introduction

In 1981 Tulare County was able to improve emergency medical communications through the purchase of centrally located medical repeaters (Med 2 and Med 9) on Blue Ridge Mountain. This enabled dispatch-to-mobile and mobile-to-hospital communication throughout the county to become a reality. All providers and base hospitals within the county utilize the Blue Ridge repeaters daily. An investigation of the Blue Ridge site by the Tulare County Communications Division revealed that the 20-year-old equipment was antiquated, falling apart, unreliable and becoming dysfunctional. It was further discovered that the equipment maker, Motorola, canceled this equipment product many years ago and the availability of replacement parts was limited, if available. In addition, the equipment did not meet the upcoming FCC mandate that requires wide band radios to be converted to narrow band. Additionally, the 20-year-old equipment could not accommodate any type of upgrade that may be required to meet future statewide EMS communication requirements. The major concern, however, was that the repeater could fail, paralyzing the county's entire EMS system and compromising medical care for the residents of Tulare County.

Approximately ten (10) years ago, the three base hospitals in Tulare County installed Privacy Plus, a communication system put in place in case of multi-casualty incidents (MCI's) or disasters. This system allowed

hospital-to-hospital communication, via a radio signal. Last year, Nextel purchased the Privacy Plus system. A few months later Nextel dismantled the system leaving the hospitals with a dysfunctional disaster communication system. Attempts to replace this service using the existing equipment were unsuccessful. Communications experts advised Tulare County that additional equipment must be purchased to make the communication system operational.

### Project Description

This project allowed the replacement of the existing Blue Ridge Med 2 and Med 9 repeaters providing reliable and FCC complaint equipment. In addition, this project funded the purchase of equipment and installation necessary to provide hospital-to-hospital and hospital-to-dispatch communication equipment, via a radio line.

### Tasks/Methodology

To purchase and install the medical repeater (Med 2 and Med 9) on Blue Ridge Mountain, Tulare County EMS obtained approval from the Tulare County Board of Supervisors to purchase and install the necessary equipment. Tulare County Resources Management Agency purchased two (2) Quantar UHF repeaters and installed them.

The same methodology was used to purchase the disaster communication

equipment with the exception of the purchase and installation, which was completed by a private contractor. Tulare County initiated a Personal Service Agreement with the contractor as well as the Base Hospitals and the dispatch center receiving the equipment.

## **Outcome & Conclusion**

This project allowed the replacement of the existing Blue Ridge Med 2 and Med 9 repeaters providing reliable and FCC compliant equipment. In addition, this project funded the purchase of equipment and installation necessary to provide hospital-to-hospital and hospital-to-dispatch communication equipment, via a radio line.

The replacement repeaters not only operate in the current wide band mode but also are programmable to allow for the narrow band mode as mandated by the FCC. In addition, they will allow further upgrades or revisions as required by State EMS when the statewide communication system is developed.

It is a well-known fact that during a disaster telephone service may be interrupted or intermittent, at best. It is at these times that hospital-to-hospital and dispatch-to-hospital communication, via a radio line, is vital. These funds allowed us to purchase the communication equipment necessary to meet this need.

Tulare County EMS will continue to look at systems to upgrade the daily hospital-to-hospital communication systems.